

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A V-belt type continuously variable transmission (CVT) for a vehicle, comprising:

 a source of a line pressure;

 primary and secondary pulleys arranged on input and output sides, the pulleys being subjected to primary-pulley and secondary-pulley pressures produced from the line pressure;

 a V-belt looped over the primary and secondary pulleys, the V-belt engaging in V-grooves of the primary and secondary pulleys, the V-grooves being changed in width through a differential pressure between the primary-pulley and secondary-pulley pressures to achieve a target shift ratio of the CVT; and

 an electronic control unit (ECU) which controls the line pressure, the ECU being programmed to:

 input a first torque signal obtained by estimating an estimated engine torque in accordance with an engine rotation speed ~~vehicle operating conditions~~ and the target shift ratio in accordance with vehicle operating conditions;

 input a second torque signal obtained by detecting an actual the engine torque, wherein the actual engine torque is derived by calculating at least the engine rotation speed and a fuel injection period;

 synthesize the first and second torque signals to provide an estimated-torque signal; and

 control the line pressure in accordance with the estimated-torque signal.

2. (Previously Presented) The V-belt type continuously variable transmission (CVT) as claimed in claim 1, wherein the ECU is further programmed to set the first torque signal as the estimated-torque signal when the engine torque rises.

3. (Previously Presented) The V-belt type continuously variable transmission (CVT) as claimed in claim 1, wherein the ECU is further programmed to:

 subject the first torque signal to differential processing and smoothing processing;

 determine a sum of the first torque signal as subjected and the second torque signal;

 and

determine a greater one of the first and second torque signals; determine a smaller one of the sum and the greater one; and set the smaller one as the estimated-torque signal.

4. (Currently Amended) A vehicle, comprising:

a source of a line pressure;

a V-belt type continuously variable transmission (CVT), comprising:

primary and secondary pulleys arranged on input and output sides, the pulleys being subjected to primary-pulley and secondary-pulley pressures produced from the line pressure; and

a V-belt looped over the primary and secondary pulleys, the V-belt engaging in V-grooves of the primary and secondary pulleys, the V-grooves being changed in width through a differential pressure between the primary-pulley and secondary-pulley pressures to achieve a target shift ratio of the CVT; and

an electronic control unit (ECU) which controls the line pressure, the ECU being programmed to:

input a first torque signal obtained by estimating an estimated engine torque in accordance with an engine rotation speed vehicle operating conditions and the target shift ratio in accordance with vehicle operating conditions;

input a second torque signal obtained by detecting an actual the engine torque, wherein the actual engine torque is derived by calculating at least the engine rotation speed and a fuel injection period;

synthesize the first and second torque signals to provide an estimated-torque signal; and

control the line pressure in accordance with the estimated-torque signal.

5. (Original) The vehicle as claimed in claim 4, wherein the ECU is further programmed to set the first torque signal as the estimated-torque signal when the engine torque rises.

6. (Original) The vehicle as claimed in claim 4, wherein the ECU is further programmed to:

subject the first torque signal to differential processing and smoothing processing; determine a sum of the first torque signal as subjected and the second torque signal; and

determine a greater one of the first and second torque signals; determine a smaller one of the sum and the greater one; and set the smaller one as the estimated-torque signal.

7. (Currently Amended) A method of controlling a V-belt type continuously variable transmission (CVT) for a vehicle, the CVT comprising:

a source of a line pressure; primary and secondary pulleys arranged on input and output sides, the pulleys being subjected to primary-pulley and secondary-pulley pressures produced from the line pressure; and

a V-belt looped over the primary and secondary pulleys, the V-belt engaging in V-grooves of the primary and secondary pulleys, the V-grooves being changed in width through a differential pressure between the primary-pulley and secondary-pulley pressures to achieve a target shift ratio of the CVT,

the method comprising:

inputting a first torque signal obtained by estimating an estimated engine torque in accordance with an engine rotation speed vehicle operating conditions and the target shift ratio in accordance with vehicle operating conditions;

inputting a second torque signal obtained by detecting an actual the engine torque, wherein the actual engine torque is derived by calculating at least the engine rotation speed and a fuel injection period;

synthesizing the first and second torque signals to provide an estimated-torque signal; and

controlling the line pressure in accordance with the estimated-torque signal.

8. (Original) The method as claimed in claim 7, further comprising:

setting the first torque signal as the estimated-torque signal when the engine torque rises.

9. (Original) The method as claimed in claim 7, further comprising:

subjecting the first torque signal to differential processing and smoothing processing;

determining a sum of the first torque signal as subjected and the second torque signal;
and

determining a greater one of the first and second torque signals;
determining a smaller one of the sum and the greater one; and
setting the smaller one as the estimated-torque signal.